



MEDICAL DEVICE INNOVATION ZONE

Business Plan

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Biomedical Device Innovation Zone
18415 101st Ave NE
Bothell, WA 98011

Board Chair
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EXECUTIVE SUMMARY

The Medical Device Innovation Zone, located in Bothell, Washington, is one of 14 regional Innovation Partnership Zones (IPZs) in Washington State focused on stimulating the growth of the state's targeted industry clusters.

The organization received its designation in 2008 through a competitive process focused on regions with an existing concentration of industry (established and start-up) and a higher education institution within its purview.

The Innovation Zone physically encompasses Bothell's four privately owned science parks and the University of Washington Bothell as well as the Lake Washington Institute of Technology in Kirkland. The innovation zone is unique in that it spans both King and Snohomish Counties. Medical device companies located within the region include Boston Scientific, Fujifilm SonoSite, Mirabilis Medical, Olympus Medical, Philips Healthcare, Siemens, and Stryker.

MISSION AND GOALS

The Medical Device Innovation Zone's mission is to accelerate the growth of the medical device industry in Washington State.

GOALS

Goal 1: Facilitate the commercialization of innovative medical technologies that result in the creation of new companies and jobs;

Goal 2: Promote the collaboration and networking opportunities among public and private stakeholders, research and development;

Goal 3: Monitor, measure, and report on the industry's progress and trends;

Goal 4: Increase the availability of a skilled workforce;

Goal 5: Promote the success and interests of the sector through advocacy.

STRENGTHS OF THE INNOVATION ZONE

Currently medical device companies make up 34% of Washington State's life science industry with 316¹ companies in 64 cities. Washington's medical device innovation ecosystem has produced a myriad of medical advances ranging from advanced imaging technologies such as ultrasound to cardiac technologies and sophisticated implants. These technologies have shortened hospital stays, reduced the economic burden of disease, and saved and improved millions of lives.

The level of innovation in medical device development in Washington State is recognized worldwide, and has resulted in acquisitions of several local companies by the very largest global leaders in the field.

¹ *Life Science Washington Economic Impact Report 2017 Data*

University of Washington was integral to the early development of ultrasound technology, which the school transferred to Advanced Technology Laboratories in 1974. ATL became a leader in ultrasound, spinning out SonoSite in 1998 before selling to Phillips. SonoSite was later acquired by Fujifilm. Today Philips is the largest medical device employer in the state, with more than 2,000 employees and SonoSite now employs 500 local professionals. More recently, Stryker acquired Physio-Control, and is continuing to grow its emergency care business.

MEDICAL DEVICE MARKET OPPORTUNITY

The United States remains the largest medical device market in the world: \$156 billion (40 percent of the global medical device market in 2017). By 2023, it is expected to grow to \$208 billion. U.S. exports of medical devices in key product categories identified by the Department of Commerce exceeded \$43 billion in 2018. The medical technology industry (commonly referred to as medical devices) consists of articles, instruments, apparatuses, or machines that are used in the prevention, diagnosis or treatment of illness or disease, or for detecting, measuring, restoring, correcting, or modifying the structure or function of the body for some health purpose. Typically, the purpose of a medical device is not achieved by pharmacological, immunological, or metabolic means.

The industry includes almost 2 million jobs in the United States, including both direct and indirect employment. Medical device technology directly accounts for well over 300,000 of these jobs. More than 80 percent of medical device companies in the United States consist of fewer than 50 employees, and many (notably start-up companies) have little or no sales revenue. U.S. medical device companies are highly regarded globally for their innovative and high technology products. R&D spending continues to represent a high percentage of medical device industry expenditures, averaging 7 percent of revenue. Compared to several other industries including automotive, defense, and telecommunications, the medical device industry invests a higher percentage of yearly revenues into product innovation, reflecting the competitive nature of the industry and constant innovation and improvement of existing technologies.

The medical device industry relies on technologies where the United States holds a competitive advantage, including microelectronics, telecommunications, instrumentation, biotechnology, and software development. Collaborations have led to recent advances including neuro-stimulators, stent technologies, biomarkers, robotic assistance, and implantable electronic devices. Since innovation fuels the medical device sector's ongoing quest for better ways to treat and diagnose medical conditions, when coupled with patient life expectancy increasing and aging populations globally, the medical device sector should continue growing at a positive rate in the future².

² *Select USA*

Business Plan Deliverables
Goal 1: Facilitate the commercialization of innovative medical technologies that result in the creation of new companies and jobs
<ul style="list-style-type: none"> • Strategic plan to relocate and enhance the offerings of the Mercury Innovation Center • Develop, publish, and maintain a medical device development and manufacturing resource list
Goal 2: Promote the collaboration and networking opportunities among public and private stakeholders, research and development
<ul style="list-style-type: none"> • Annual Medical Device Summit • Industry networking events • Executive roundtables
Goal 3: Monitor, measure, and report on the industry’s progress and trends
<ul style="list-style-type: none"> • Update economic impact study
Goal 4: Increase the availability of industry workforce
<ul style="list-style-type: none"> • Medical Device Assembler Certificate at Lake Washington Institute of Technology • Medical Device Technician Associates Degree at Lake Washington Institute of Technology • Internships • Support for local STEM programs
Goal 5: Promote the success and interests of the sector through advocacy
<ul style="list-style-type: none"> • Increase social media and digital marketing • Lead initiatives to communicate sector priorities among constituents and government entities

LEADERSHIP AND GOVERNANCE

The Medical Device Innovation Zone is a collaborative organization led by its founding partners: the City of Bothell; University of Washington Bothell; Life Science Washington; the Economic Alliance Snohomish County; and the Washington State Department of Commerce. Working with a host of supporting partners, the organization serves as the lead convener of the medical device industry in the region.

Collaborative supporting partners include industry firms Philips Healthcare, FujiFilm SonoSite, Taproot Medical Technologies, Boston Scientific, and Mirabilis Medical, as well as the Lake Washington Institute of Technology and service firms Moss Adams, Christensen O’Connor Johnson Kindness, and Product Creation Studio.

The Innovation Zone's volunteer officers and board members serve as the Management Team for the organization:

Chair and Interim Treasurer

Matt Smith

Matt Smith is a Director at Economic Alliance Snohomish County. In his role with Economic Alliance, Smith is responsible for managing the organization's retention, expansion, and recruitment projects; life science is a program focus. EASC is the state-designated Associate Development Organization for Snohomish County.

Vice Chair

Jens U. Quistgaard, Ph.D.

Jens Quistgaard is the CEO of Taproot Medical Technologies, a company developing medical applications of a novel biomaterial developed at the University of Washington. He was formerly CEO of Mirabilis Medical, a women's healthcare company dedicated to improving the treatment of symptomatic uterine fibroids using its proprietary high-intensity focused ultrasound (HIFU) technology. Prior to Mirabilis, Quistgaard was CEO of LipoSonix, and held senior level positions at SonoSite, and ATL Ultrasound.

Secretary and Administrator

Jeanie Ashe

Jeanie Ashe has more than 15 years' experience leading positive community growth through a variety of community and economic development projects and programs. Prior to joining the City of Bothell as its economic development manager, Ashe worked for the Nevada Commission on Economic Development and the Washington State Department of Commerce as well as the Columbia River Economic Development Council and the City of Lake Stevens.

Directors

Suzanne Ames, Ed. D.

Dr. Suzanne Ames is the Vice President of Instruction, Associate Vice President of Instruction, and Interim Vice President of Instruction at Lake Washington Institute of Technology prior to being appointed Vice President of Instruction. Her career in the state's community and technical college system includes Director of Institutional Planning and Effectiveness at Skagit Valley College, Vice President of Advancement, and Executive Director of the Foundation at Pierce College, Director of Communications at the State board for Community and Technical Colleges, and Director of Marketing and Communications at Cascadia College. She has taught Business Management courses and serves as an accreditation evaluator for the Northwest Commission on Colleges and Universities (NWCCU). Dr. Ames has an Ed.D. in Educational Leadership and Change from Fielding Graduate University, an MBA in Marketing from City University.

Tom Clement

Tom Clement is an independent consultant. He is a seasoned medical device veteran with more than 30 years' experience in the industry including CEO of startups Pathway Medical Technologies, Aqueduct Neurosciences, and Cardiac Insight.

Marc Cummins

Marc Cummins, Vice President at Life Science Washinton, is a seasoned policy veteran with experience representing high-tech industries in both Washington, DC and Olympia. Previously, he served as Director

of Policy and External Affairs for the Pacific Northwest National Laboratory (PNNL), which is operated by Battelle for the U.S. Department of Energy (DOE).

While at the PNNL, Cummins was actively involved in creating and advocating for several statewide bioscience initiatives including the Life Sciences Discovery Fund and a new State-Federal bio products and biofuels research center at the Washington State University Tri-Cities. He was also deeply involved in a range of science, technology, engineering, and math (STEM) education partnerships and science education initiatives.

Cummins has more than 20 years of policy experience at both the federal and state level supporting the growth of high-tech industries and creating innovative, public-private partnerships.

Findley Gillespie

Findley Gillespie is a partner at Moss Adams. He has more than 15 years of internal audit implementation and public accounting experience and currently specializes in Sarbanes-Oxley (SOX) consulting, internal audits, controls-based consulting and federal contracting consulting. He has experience managing and directing all phases of internal audit and SOX implementations including risk assessment, documentation, and internal controls testing for a variety of clients.

Gillespie also serves as the acting outsourced internal audit director for several publicly traded organizations. He is the lead partner on one of Moss Adams' largest SOX consulting engagements and also works with many pre-public and non-accelerated filers.

Lori Melkerson

Lori Melkerson is the Vice President of Operations at Boston Scientific. Melkerson has worked in manufacturing engineering and operations in the medical device industry for 25 years with experience in moving products from concept to commercialization. Prior to joining Boston Scientific, she worked for Abbott Laboratories and Heart Technology.

Scott Paulson

Scott Paulson is the Senior Director of Regulatory Affairs and Quality Systems and Compliance Officer at FUJIFILM Sonosite. Additionally, he oversees standards for equipment management for ultrasound manufacturing and products. Paulson holds a Bachelor of Science in Aquatic Fishery Sciences and a certificate in Medical Regulatory Affairs from the University of Washington.

Marc Servetnick, Phd

Mr. Servetnick is the Interim Dean of the School of STEM at the University of Washington Bothell, previously leading the Biology Department at the UWB. He earned his Ph.D. in Zoology from the University of California, Berkeley in 1985. He was a Postdoctoral Researcher at the Max Planck Institute for Developmental Biology in Tübingen, Germany, and at the University of Virginia. He taught at Ithaca College, in Ithaca, NY, for 15 years, where he also served as Chair, before coming to UW Bothell. He has also served as Program Director at the National Science Foundation. Dr. Servetnick's research focuses on embryonic development and evolution.. His current research focuses on the T-box gene family in the development of the sea anemone *Nematostella vectensis*.

Julia Terlinchamp

Julia Terlinchamp is Governor's Sector Lead and Director of Life Science and Global Health Development at the Office of Economic Development and Competitiveness within the Washington State Department of Commerce. Before joining Commerce, she worked as Governor Inslee's Northwest Regional Representative serving Snohomish, Skagit, Whatcom, Island, and San Juan counties. While working for the Governor, she focused on stakeholder engagement and coalition building. Prior to that position,

Terlinchamp worked in the Bothell office as Congressional Liaison to Representative Suzan DelBene of Washington State's 1st Congressional District. She also worked in Washington, DC both on and off the hill.